CLAIMS

1. A device for injecting a gas into a liquid, comprising an auto-suction turbine (5) for producing a gas-liquid dispersion, an axial flow rotor (4) for collecting said dispersion, and means for sending the gas-liquid dispersion to said axial flow rotor (4), characterized in that said means comprise deflecting means (8, 8', 8", 8‴) incorporated in the auto-suction turbine (5).

2. The device as claimed in claim 1, characterized in that said deflecting means (8, 8', 8", 8‴) consist of an upper member, called deflecting member, of the auto-suction turbine (5), having a larger diameter than that of a lower member (9) of said turbine and a profile suitable for deflecting said dispersion toward the axial flow rotor (4).

3. The device as claimed in claim 2, characterized in that said deflecting member (8) has a conical profile.

4. The device as claimed in claim 3, characterized in that said conical profile makes an angle of between 30° and 40° with the horizontal plane.

5. The device as claimed in claim 2, characterized in that said deflecting member (8', 8") comprises an annular flap (8'b, 8"b).

6. The device as claimed in claim 5, characterized in that said annular flap (8'b) has a frustoconical profile.

7. The device as claimed in claim 5, characterized in that said annular flap (8"b) has a rounded profile.

8. The device as claimed in claim 2, characterized in that said deflecting member (8‴) is a member with a convex profile.

9. The device as claimed in claim 8, characterized in that said convex profile is an elliptical profile.

10. The device as claimed in any one of claims 1 to 9, characterized in that the means for sending the gas-liquid dispersion to said axial flow rotor (4) further comprise substantially vertical counterblades (19), arranged radially to the auto-suction turbine (5) and to the axial flow rotor (4).

11. The device as claimed in claim 10, characterized in that the counterblades (19) have upper notches (21a, 21'a) designed to enable the deflecting member (8, 8', 8", 8‴) of the auto-suction turbine (5) to penetrate therein.

12. The device as claimed in either of claims 10 and 11, characterized in that the counterblades (19) have lower notches (21b) designed to enable the axial flow rotor (4) to penetrate therein.